

Article

Not Only a Matter of Electricity—Rethinking Materiality with Victor Grippo’s *Energía de una papa* (1972)

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Abstract: In order to consider the materiality of Victor Grippo’s artwork *Energía de una papa* (1972) more comprehensively than has thus far been the case, the specific characteristics of this case study are initially discussed against the background of the relationship between materiality and conceptual art. In a further step, the artwork’s agency is questioned, and it is regarded in the context of positions within new materialism. This is done by utilizing certain aspects of Karen Barad’s concept of “agential realism” in an examination of Grippo’s artwork. Our thesis is that while the Baradian approach is able to explain materiality within the functioning of the case study, the complex embedding of materiality and symbolic factors for the context of the art require an even broader perspective. Finally, the different layers of materiality—the material presence and the immaterial, less tangible aspects—are considered together in order to show their indispensable entanglement in generating the artwork’s meaning. It is not just the potato as food-as-art-material or the voltameter as a ready-made that must be our focus, but all the organic, non-human materials and the non-tangible elements involved in the artistic work, as well as the human being who sets the process in motion.

Keywords: materiality and conceptual art; agency of art; Karen Barad’s “agential realism”; Victor Grippo



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1. Introduction

This article deals with different layers of materiality and the complex interweaving of material presence and immaterial, less tangible aspects, using the example of Victor Grippo’s artwork *Energía de una papa* (*Energy of a Potato*, 1972). Our aim is to rethink its material dimension in a more comprehensive manner than has thus far been undertaken.

Our analysis is guided by art history approaches as the ‘iconology of materials’ that deal with questions of materiality, i.e., considering material not only as a technical matter, but also as an aesthetic category (Wagner 2001; Buskirk 2005)¹, in conjunction with discourses of the material turn within the humanities and social sciences, as well as with the approaches of new materialism (Bredenkamp and Schäffner 2020; Coole and Frost 2010). Methodologically, this article will in particular tie in with the “material complicity” approach proposed by the art historian Petra Lange-Berndt (2015; for the following quotes: 12–18). She defines material as “substances that will be further processed [...] substances that are subject to change, be it through handling, interaction with their surroundings, or the dynamic life of their chemical reaction [...] that which artists are working with [...] as an effect of an ongoing performance.” As a result, materiality “[...] points to the whirling complexity and entanglement of diverse factors in the digital age, in which ‘material’ which like sound or language can now also be something that is not physical, is an effect of an ongoing performance.”

This article also links up with the concept of materiality as conceived by the art historian Christian Berger, who writes that “materiality” is particularly well suited to comprehending both abstract considerations and concrete materials and their potential, precisely because it is open. This is, nevertheless, a characteristic that is often viewed critically (Berger 2019, p. 4).

In an initial step, the specific characteristics of our case study of Grippo will be discussed against the background of discourses on the relationship between materiality and conceptual art. In a further step, its agency will be questioned, and our artistic case study brought into connection with positions within new materialism (see [Coole and Frost 2010](#)) in order to try and rethink its materiality. This will be performed by transferring certain aspects of Karen Barad's concept of "agential realism" to Grippo's artwork. Our thesis is that while the Baradian approach is able to explain the aspect of materiality in the functioning of the case study, the complex embedding of materiality and symbolic factors for the art context require an even broader perspective. Ultimately, it will be necessary to bring together the material presence and the immaterial, less tangible aspects inherent to the artwork.

2. Materiality I: *Energía de una papa* by Victor Grippo in the Context of the Materiality of Conceptual Art

The Argentine artist Victor Grippo (Junin/Buenos Aires, 1936–2002) came from a family with a migrant background; his father was from Italy, his mother was an Argentinean of Albanian origin. Grippo studied chemistry and pharmacy at the University of La Plata before turning to art in the 1950s. From the 1960s, he experimented with sculpture and installation; he was also active in writing, for example, through texts that can be classified in hermetic poetry. Grippo used simple materials and objects from everyday life in his art, not infrequently using foodstuffs such as bread and potatoes for his artworks, which often had a participatory component. He is considered the most important representative of conceptual art in Argentina. In his art, he was committed to the concerns of the working class. Particularly noteworthy, and closely linked to his education, is the convergence of art and science expressed in his interest in the representation of processes and transformations. This attention to transformation is also to be understood in social terms, since Grippo lived through the difficult years of Argentine history, which were initially marked by the Peronist politics of the 1950s, the subsequent turbulent and unstable phases, which were marked by a military dictatorship and state terror in the 1970s, only with difficulty culminating in a process of democratization beginning in the 1980s.²

Grippo realized *Energía de una papa* (*o Sin título o Energía*) in 1972. It consists of a potato, a black and red wire, and a black electricity meter (Figure 1).

A version of the object is now in the Tate in London. On the institution's website, the art critic Michael [Archer \(2016\)](#) describes the object's mode of functioning and its curatorial-conservation specifics as follows:

It consists of a simple electrical circuit in which an analogue multimeter is connected to a potato by two wires. Because the electrodes on the end of the wires are of different metals—one copper, the other zinc–galvanised iron—the circuit allows the potato to act as a simple battery. The battery works through the reciprocally balanced processes of oxidation and reduction occurring at the electrodes: the acidic juices of the potato oxidise the zinc, producing electrons that pass through the wires and multimeter to the copper electrode, where they reduce hydrogen ions to form hydrogen. Because the zinc slowly dissolves as a result of this process, the electrode needs to be renewed periodically. Similarly, the potato perishes and when the work is exhibited it is usually replaced weekly. When exhibited the multimeter is usually set to display voltage (V), rather than current (mA).

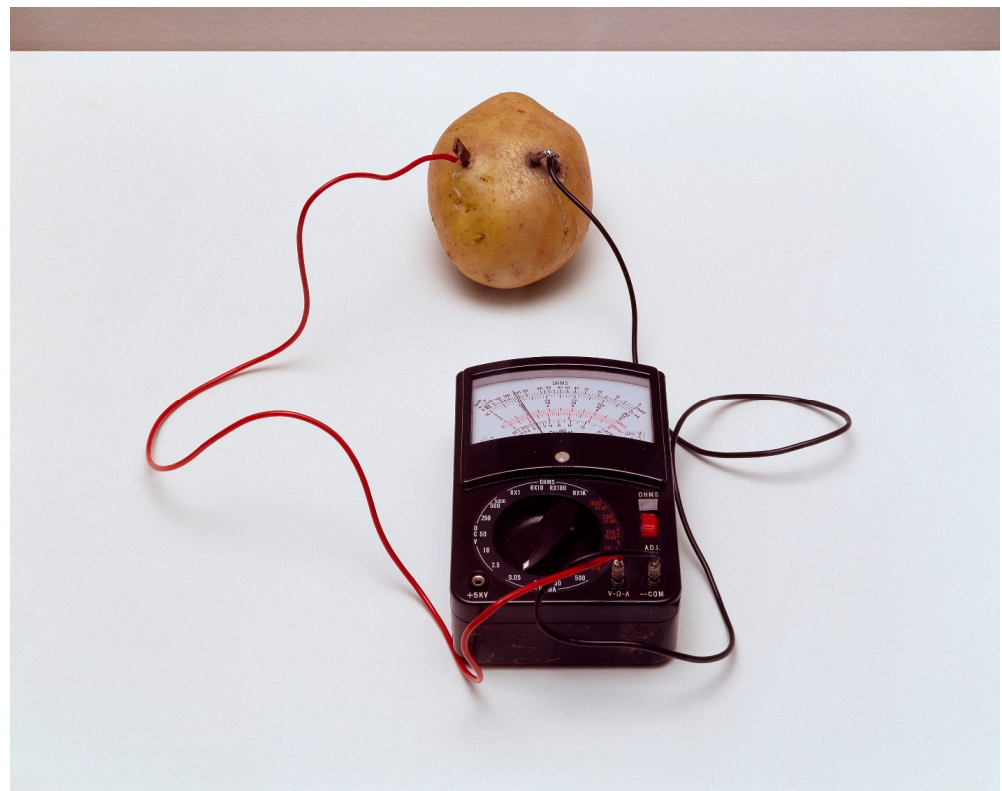


Figure 1. Victor Grippo, *Energía de una papa (o Sin título o Energía)/Energy of a Potato (or Untitled or Energy)*, 1972. Potato, electric meter, electrodes, and wires. Dimensions: 40 × 120 × 250 mm. Tate, London, Ref. T12167 © The Estate of Victor Grippo.

This artwork is part of the *Analogía* series (1970–1977) in which Grippo used potatoes in multiple variations (Longoni 2004, pp. 21–23, 78–83, 86, 92–93). The series includes, for example, *Analogía I* (1970–1971): here, one potato is placed in each compartment of a wooden shelf; in total, there are forty potatoes connected to each other and to a tension gauge in the center (Figure 2).

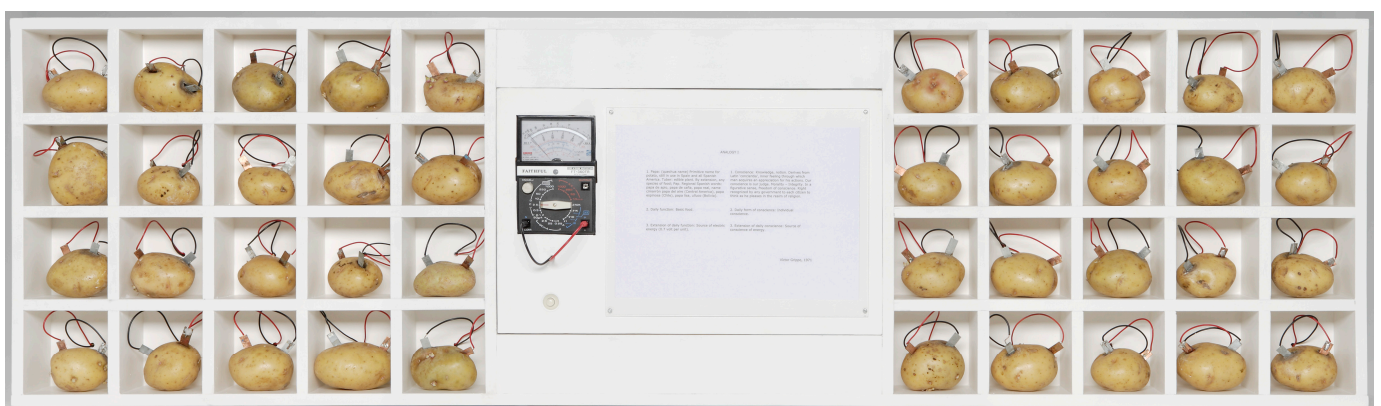


Figure 2. Victor Grippo, *Analogía I*, 1970–1971, electric circuits, electric meter and switch, potatoes, ink, paper, paint, and wood. Dimensions: 47 × 156.2 × 10.3 cm (18 ½ × 61 ½ × 4 1/16 in.). Harvard Art Museum (2010)/Fogg Museum, Richard Norton Memorial Fund and gift of Leslie Cheek, Jr., © The Estate of Victor Grippo, Photo © President and Fellows of Harvard College, 2010.3.

Another version of *Analogía I* is kept in the Museum de Bellas Artes in Buenos Aires. With regard to the curatorial–conservation specifics associated with the use of potatoes as an art material, and also to displaying the object, the local curator–conservator Mercedes

Isabel de las Carreras (2022, p. 189) explains that the challenging aspects of conservation depend as much on the right choice of potato as on the museum environment. This is why the potato in Grippo's *Energía de una papa* is regularly replaced in exhibition contexts. There are also aesthetic reasons for this because the decomposition process changes the appearance and shape of the potatoes. de las Carreras has also calculated that if the work is to be exhibited permanently for 2 years, the cost of more than 2160 replacement potatoes and at least 120 working hours for conservators–restorers must be included in the budget in order to make the 2 changes necessary each month.

In this context, de las Carreras (2022, pp. 187–188) emphasizes how the process of replacing the organic material of the potato eclipses the idea of originality and uniqueness of the artwork. She writes: “[...] The underpinning ideas have precedence over its material or tangible aspects, favoring intellectual reflection over visual stimulation [...] and the idea prevails over the physical artwork itself” (de las Carreras 2022, p. 187). Grippo's work is associated with conceptual art, and he is considered one of its main representatives in both Argentina in particular and in Latin America as a whole. However, the valuable art works of this important Latin American artist have unfortunately been insufficiently studied and contextualized to date and have been insufficiently received in art historical discourse in Europe. In the words of art critic Tony Godfrey (1995, p. 567): “[...] Grippo is a substantial figure whose achievements, like other Latin-American artists, remain undervalued.”

Contrary to de las Carreras's opinion given above, which is the most accepted theory in the conservation of contemporary art,³ art history research has already shown how unproductive and obsolete the supposed dichotomy is between idea versus material with regard to conceptual art. It has also been shown that material contexts and tools, alongside scientific discoveries and philosophical traditions, have influenced positions of conceptual art that have by no means favored intellectual concepts over material aspects (Berger 2019; Egenhofer 2011). It has also already been emphasized that conceptualism had a political dimension in contexts such as Latin America and Eastern Europe (Berger 2019, p. 4), where authoritarian regimes prevailed between the 1950s and 1970s.

The above-mentioned potato's replacement procedure brings about something that could be called “aesthetically equivalent” in the opinion of the art historian Sebastian Egenhofer (2011, p. 90). In his analysis of the relationship between aesthetic materiality and conceptualism, he has shown that “the non-reproducibility or singularity is an ontological structure of the work, not an empirical characteristic of its objective, material substrate” (Egenhofer 2011, p. 92).

As the positions of Archer and de las Carreras show, the organic material of the potato is the focus of attention because of its changing properties and condition. These organic characteristics of the potato show the temporally determined structure of the work. However, the potato is not the only material of which Grippo's work of art is comprised. The voltmeter is also an essential component: As described by Archer (2016), the combination of two different electrodes (one of copper, one of zinc) with an electrolyte (here, the electrically conducting liquid, i.e., the phosphoric acid of the potato) as present in *Energía de una papa* and in the *Analogía* series is known as a galvanic cell.⁴ The two different metal electrodes are inserted into the potato and the voltmeter measures the electrical voltage that is thereby generated. The potato juice is here used to produce electricity. Because chemical energy is converted into electrical energy in this process, one can speak of a potato battery, though the electrical voltage generated is low. This means that the resulting small quantity of energy is also a material component of the artistic work, even if it is not haptically tangible. Over time, the properties of the potato juices decrease, and no more electricity is produced. The potato is thus also replaced regularly in order to guarantee that the galvanic cell continuously produces an electric current.

The materiality of our case study is thus about the complex entanglement of something quite concretely material with more abstract, immaterial concepts and less tangible matters such as energy. As the philosopher, writer, and expert on contemporary art de Mèredieu (2008, p. 496) summarizes, from the 1960s to 1970s, electric manifestations will be integrated

into the work of art in the form of light or its magnetic and electro-magnetic effects and artists more and more take into account the “abstract” energy that electricity represents (485). In keeping with empirical scientific evidence (de las Carreras 2022, p. 187), Grippo’s battery apparatus—dispositive in the Foucault sense (for an explanation of this Foucauldian category, see Link 2008)—shows the electrical capacity (Longoni 2004, p. 21) that would otherwise remain invisible to the naked eye.

While the curator Angeline Scherf (2004, p. 57) writes (unconvincingly) that Grippo, like Giuseppe Penone in *Patate* (*Potatoes*, 1977), asserts both the aesthetic aspect of the potato and also its symbolic and political dimension (and rightly so, as we shall discuss later), the curator Guy Brett (2007, p. 425) emphasizes an apparent “anti-aesthetic” in which the phenomena and material processes show themselves as they really are, i.e., devoid of any further, aesthetic considerations. For art historian Ana Longoni (2004, p. 21), the potato battery, like Grippo’s artistic project *Horno de pan* (1972), is less about the object itself than about the representation of a process. In the latter artwork, Grippo and other artists built an oven in the middle of a public square in Buenos Aires, put it into operation, and baked bread in it. They then distributed it among the people. After two days, however, the artistic action was stopped by the Peronist police (Godfrey 1995, p. 567). Furthermore, Longoni (2004, p. 22) stresses that Grippo: “[...] no inviste de nuevos atributos (exóticos) al objeto cotidiano sino que visibiliza aquello que ya porta pero queda habitualmente oculto ante la mirada corriente” (he “does not invest everyday objects with new (exotic) attributes, but instead makes visible that which they already bear within them but which is usually hidden from the ordinary gaze”). Grippo also believes that the work of art is about a “concreción a partir de imágenes de objetos cotidianos que por modificación de ciertas variables cobran otra significación,” (a “concretisation based on images of everyday objects that take on a different meaning through the modification of certain variables”, Longoni 2004, p. 19), which means that a change of context of the materials plays a decisive role, as it did for the avant-garde and conceptual art (this occurs in *Energía de una papa* and in *Analogía*, where ready-mades such as the potato are taken from their everyday context of being prepared in the kitchen and eaten, and in which electrodes, wires, the electricity meter, and the idea of the galvanic cell have been taken out of the field of science and moved into the context of art). For Grippo’s *Energía de una papa*, “[...] nature and technical device combine to form a source of power,” as Magdalena Holzhey (2022, p. 296) has written about Joseph Beuys. Godfrey (1995, p. 567) attributes a “Beuysian pedagogic rôle [*sic*]” to Grippo, as the latter “wants to make us more aware of our connexions with nature and to draw analogies between art and science (he himself trained as a chemist): ‘industrial’ and natural elements are frequently juxtaposed in his work.”

In Grippo’s object, however, another level of audience participation also plays a role when his empirically, scientifically created apparatus is transferred to the context of art. Here, the artist makes the function of a battery comprehensible to the viewers through their act of observation and thus through their own aesthetic experience. As with Beuys, one can also speak of an “erweiterten Kunst- und Wissenschaftsbegriff” in Grippo’s work (an “expanded concept of art and science”, Holzhey 2022, p. 296). Not only do Beuys and Grippo share the goal of social transformation through art, but the materials and art forms used in this regard also connect the two. Brett (2004, p. 53) writes, for example, that both artists treat materials as energy, rather than using them as mere passive vehicles in the service of the idea of form. Furthermore, Brett writes that both make use of the concept of the battery and translate it into their art, though it seems that Beuys was unaware of Grippo’s work, such as the radio that Grippo set in motion through potatoes twelve years before Beuys’ Capri-Battery, or the potato battery discussed here.

The galvanic cell originates in science and is here elevated to the status of art by its change of context or, as the philosopher and art historian Gottfried Boehm (2007, p. 99) puts it, scientific concepts of images and modes of representation migrate into art, expanding it and changing its metaphors.

Godfrey (1995, p. 567), reading Grippo's work, highlights his combination of farm food and scientific experiments. Grippo's work with a potato at the interface of art, science and technology—as Longoni (2004, p. 25) rightly characterizes it—does not, however, primarily focus on properties of the tuber such as its edibility or taste, but rather explores its chemical composition and the fact that its organic material is an energy source (Spaid 2007, p. 12). After having served as part of the galvanic cell, the potato contains metal ions and can no longer be consumed. It therefore loses its affordance as a nutrient carrier (Senkpiel 2021).⁵

This artwork thus reveals a level of the potato that is not present in other works that use the tuber as artistic material. Potatoes appear in artistic contexts mostly in cooking and eating settings, where an essential role in the generation of meaning is attributable to the fact that the potato has become a principal source of food for the poor (“[das] Hauptnahrungsmittel”, Raap 2002, p. 211) alongside its political and ecological dimensions. A comparison between Grippo's *Energía de una papa* and the kinetic sculpture *Apparat, mit dem eine Kartoffel eine andere umkreisen kann*, 1970, by Sigmar Polke, illustrates the role of the potato as an active agent in Grippo's work.⁶ Polke's kinetic sculpture is characterized by the fact that the artist initially incorporates the potato as a static element, so to speak, which is only activated by an external influence, i.e., by a motor that has to be set in motion by a human being, at which wires inserted in the tuber begin to rotate. Grippo's use of the potato also requires human assistance, though he relies on its organic properties that can generate electricity when entangled with other elements, as in the galvanic cell.

3. Materiality II: Rethinking Grippo's Potato Battery through New Materialism and Karen Barad's "Agential Realism"?

Brett (2007, p. 425) aptly says of Grippo: “In his vision the alchemist's or the artisan's understanding of materials (artisans of every trade) joins with that of the scientist/inventor and the artist as a way of being in the world, of interaction with it.” This ties in with discourses around new materialism (Coole and Frost 2010; with particular focus on art history: Bredekamp and Schäffner 2020; for a critical review from a social science perspective cf. Hoppe and Lemke 2021). Its heterogeneous approaches focus on the agency of matter and thus relativize an anthropocentric view. In these discourses, agency is not exclusively attributed to humans (in the sense of subjects with the capacity for consciousness and intentionality), but also to material objects and things. In so doing, the relationship between matter and meaning, nature and culture, and the human and the non-human are subjected to critical questioning.

As we have seen, Grippo's artistic work emerges from a scientific context in which apparatuses play an important role. One of the most prominent exponents of new materialism, the physicist and philosopher Karen Barad, has developed an approach that is particularly suited to the analysis of object-based settings (Hoppe and Lemke 2015, p. 269), which can include Grippo's potato battery as described above. It thus seems worth trying to apply certain aspects of Barad's theory of “agential realism”, respectively, “Intra-action” (Barad 2007; cf. also Hoppe and Lemke 2021, pp. 59–79 with a critical review) to a discussion of Grippo's example in order to rethink its materiality. The connection of Grippo's artwork with Barad's theory also seems appropriate because both are scientists—we recall Grippo's university education as a chemist and pharmacist mentioned at the beginning of this article. The shared scientific background makes the interest in complex inter-relationships, (not only energetic) processes, and cause–effect relationships plausible.

With her “agential realism” concept, Barad aims at a redefinition of the boundaries or the relationship between objects, people (conceived as part of the world–body–space), and language, thus questioning the metaphysical notion of autonomous individuals. In Barad's words (Barad 2007, p. 139):

This relational ontology is the basis for my posthumanist performative account of material bodies (both human and nonhuman). This account refuses the representationalist fixation on words and things and the problematic of the nature

of their relationship, advocating instead a relationality between specific material (re)configurings of the world through which boundaries, properties, and meanings are differentially enacted (i.e., discursive practices, in my posthumanist sense) and specific material phenomena (i.e., differentiating patterns of mattering). This causal relationship between the apparatuses of bodily production and the phenomena produced is one of agential intra-action.

As can be seen from this description, so-called intra-action is essential to Barad's "[...] posthumanist performative approach to understanding technoscientific and other naturalcultural practices that specifically acknowledges and takes account of matter's dynamism" (Barad 2007, p. 135). She goes on: "[...] it is through specific intra-actions that phenomena come to matter—in both senses of the word." (Barad 2007, p. 140).

What aspects of Barad's agential realism can now be made productive in reading Grippo's *Energía de una papa*? If we re-think this work in Barad's terms, the electric voltage is constituted and manifested through the intra-action of the agents potato, electrodes, and voltmeter in the form of an "apparatus" (or galvanic cell). The electrical current materializes in the course of a causal relation or causal intra-action: only in this combination can the potato contribute to generating the electric current. Furthermore, as a human being, Grippo's role in preparing the potato battery would also correspond to that of "Humans [who] do not merely assemble different apparatuses for satisfying particular knowledge projects; they themselves are part of the ongoing reconfiguring of the world [...] they/we too are phenomena" (Barad 2007, pp. 171, 206).

Although the artist could be understood as a kind of mediator, making the apparatus work, and although one could say that the galvanic cell is a kind of actor-network that, according to the sociologist and philosopher Bruno Latour, emerges from a hybrid, non-hierarchical collaboration between human and non-human actors (Latour 2007, pp. 76–79), Barad would rather say that apparatuses are not merely composed of humans and non-humans in the sense of the ANT, because their materiality creates a condition of possibility between humans and non-humans.

Katharina Hoppe and Thomas Lemke have shown that certain new materialist positions are characterized by an ambivalence in the analysis and conception of materiality. This ambiguity consists in the fact that the entanglements of the material are brought forth, though at the same time a "Wirkmächtigkeit der Materie 'an sich'" is also presupposed ("a potency of matter 'in itself'", English translation by the present writer; cf. Hoppe and Lemke 2021, p. 141). Hoppe and Lemke note that this is also the case with Barad, who invented the neologism "intra-action" precisely in order to fathom complex material relations, but at the same time also speaks in some places of "matter's dynamism" (see, for example, the above quotation in Barad 2007, p. 135; cf. Hoppe and Lemke 2021, p. 142).

A similar kind of tension can also be seen in research on Grippo. For example, when the curator and art critic Justo Pastor Mellado (2004, p. 64) writes that Grippo "[...] realiza experiencias estético-científicas, algunas de las cuales parten de la utilización de la energía eléctrica contenida en vegetales" ("[...] carries out aesthetic/scientific experiments, some of which are based on the use of the electrical energy contained in plants"), his statement that plants contain electrical energy is scientifically incorrect. It is obvious that the potato *must* be part of the galvanic cell so that the juices within it can act as an electrolyte. One of the potato's inherent dynamics could be the developmental stages it undergoes as an edible tuber of the potato plant (Friedman et al. 2021), or the spoilage or decomposition process that it undergoes.

Barad's approach, then, can be used to determine the share of materiality in the operation of the case study. This is particularly true of the agency model that she proposes, which, as intra-action, implies a dynamic relationship rather than something that one or something (already) has. It is also fruitful to include the role of man, i.e., Grippo as artist and scientist, in relation to the other organic and inorganic materials and the unleashing of their potential in a comprehensive consideration of the materiality of the apparatus, and thus also in explaining the functioning of the artistic work.

If one thinks of the aforementioned properties of the organic material of the potato and those of the voltmeter, which must be exchanged regularly by humans in order to guarantee the correct functioning and thus the effect of the artwork, then it becomes clear that the materials of the artwork and of the human being are to be understood as agents that act in entanglement. As the anthropologist Tim Ingold (2007) has described it, they are subject to constant change because their interconnectedness is relational and processual.

4. Symbolic and Political Dimensions of the Materiality of *Energía de una papa* and *Analogía*

Now that we have explained the functioning of Grippo's artwork *Energía de una papa* and have taken a closer look at its agency, it is now necessary to draw attention to its symbolic content and political dimensions by setting forth the previous interpretations of Grippo's artworks.

In the *Analogía* series and in other versions of the work, the audience can turn on the voltmeter. According to Archer (2016), this form of active, voluntary audience participation goes back to Grippo's interest in everyday actions in connection with knowledge, which is often represented in his sculptural works. The curator and philosopher Sue Spaid (2007, p. 13) points out that Grippo's artwork is more audience-oriented than that of the Arte Povera artists, who also used simple materials from everyday life. According to Longoni (2004, pp. 22–23), the analogy that gives the series its title is also intended to signify the level of reception on the part of the viewer, whose experience in encountering the work completes or realizes this analogy and thus reinforces the concept underlying the work. Researchers have also interpreted both *Energía de una papa* and the entire *Analogía* series mainly in terms of these possible parallels, in light of a text by Grippo in one of the many versions of *Analogía I* where he refers to the connection between potato(s), consciousness and energy. Following on from this theme, our example also shows the importance of language as "written text or printed matter" (Berger 2019, p. 6) for the materiality of conceptual art. Grippo's text reads as follows:

1. Papa: (voz quichua) Nombre primitivo de la papa que aún se usa en España y en toda América. Tubérculo: papa de apio, fam. Paparruchada. Figure y fam. Cualquier especie de comida. Sopas blandas y puches. Papa de caña o real; agua turma; planta compuesta comestible. América Central: papa del aire. Ñame cimarrón. Chile: papa espinosa. Bolivia: papa lisa, ulluco. 2. Función cotidiana de la papa: Alimentación básica. 3. Ampliación de la función cotidiana: Obtención de energía eléctrica (0.7 volt por unidad)

1. Conciencia: Conocimiento, noción. Deriva del latín "concientia". Sentimiento interior por el cual el hombre aprecia sus acciones. Nuestra conciencia es nuestra jura. Moralidad—integridad. En sentido figurado: libertad de conciencia, derecho que reconoce el Estado a cada ciudadano de pensar como quiere en materia de religión. 2. Forma cotidiana de la conciencia: Conciencia individual. 3. Ampliación de la función cotidiana: Obtención de conciencia de la energía." (Quote in Battiti 2004, p. 78)

("1. Potato: (Quichua item) Primitive name of the potato that is still used in Spain and in all America. Tuber: celery potato, fam. paparruchada. Figure and fam. Any kind of food. Soft soups and puches. Potato of cane or real; turma water; edible compound plant. Central America: air potato. Chile: spiny potato. Chile: spiny potato. Bolivia: papa lisa, ulluco. 2. Daily function of the potato: basic food. 3. Expansion of the daily function: Obtaining electrical energy (0.7 volt per unit).

1. Consciousness: Knowledge, notion. Derived from the Latin "concientia". Inner feeling by which man appreciates his actions. Our conscience is our oath. Morality—integrity. Figuratively: freedom of conscience, the right recognized by the State to each citizen to think as he wishes in matters of religion. 2. Everyday

form of conscience: individual conscience. 3. Expansion of the everyday function: Obtaining consciousness of energy.”)

Thus, according to Archer (2016) and the art critic Jorge Glusberg (2020), *Energía de una papa* emphasizes the parallel between the transformation of matter when the potato battery is put into operation and the intended transformation of the audience’s consciousness or perceptual process when encountering the work. While the critic Lyle Rexer (2007, p. 202) believes it is about an analogy between spiritual nourishment and nourishment for the body, the curator Adriana Lauria (2004, p. 30) alludes to the increased mental capacity of a well-fed people. Brett (2007, p. 427) speaks of a poetic analogy between energy and consciousness. Furthermore, a parallel between the tuber and the human brain as the seat of consciousness is brought into play. This occurs in pre-Hispanic Andean cultures, where, for example, the potato is represented by clay figures with human features (Longoni 2004, p. 22). In the context of the “generación ‘pobre’ y simple de energía autosuficiente,” Grippo’s artwork with potato(s) further points to the larger context of the liberation of the Latin American subcontinent from regionalism (Ballestreros 1993: 19, quoted after Longoni 2004, p. 22, fn. 28). The political level is thereby addressed, pointing to a possible subversive allusion on the part of the potato to transformation and liberation from the repressive political context in Argentina in particular, and Latin America in general; Brett 2007, p. 427) accordingly states: “That the potato, a tuber which originates in Bolivia, Peru and the North America, could stand for raising consciousness, and empowerment of the downtrodden of the continent, is already coded with a poetic wit equally subversive of the protocols of political discourse and of art exhibitions.” Finally, Lynn Houston (1999) highlights another politically connoted level of the potato as an art material in Grippo’s work when she writes: “His [Grippo’s] use of the potato is also symbolic of a larger identity that makes reference to the history of colonisation by the Europeans: the potato is native to the Americas and it was only introduced to Europe as a result of the Conquest.”

Longoni (2004, pp. 22–23) also draws attention to the fact that in further versions of *Analogía I*, the artist distributes the potatoes on chairs and tables and in other variants, e.g., in *Analogía IV* (1972), on plates, and juxtaposes real and artificial tubers consisting of acrylic potatoes. In this way, the artist alludes more strongly to the everyday function of the potato as a staple food on the one hand, while on the other hand, he increasingly exhibits the artificiality and the artistic nature of the work in the context of the series. What is more, bringing together several energy sources has a political connotation to the effect that this merged energy has the potential to change the world.

5. Conclusions: The Entanglement of Matter and Meaning

To understand the functioning of Grippo’s so-called potato battery, it is not necessary to recognize the potato as food. It is rather its chemical composition that, together with the other material elements of the apparatus and with human participation, enacts the energy of the battery. The potato has a share in the artistic work not only because of its primary affordance as food, but as part of an intra-action according to Karen Barad’s concept of agential realism.

However, with regard to the meaning of the artistic work, the fact that the potato is a staple food is an added but essential value that opens up a whole spectrum of interpretations. As art historian and curator Ralf Beil (2002, p. 222) pointed out: “Die Kartoffel ist besonders geeignet als Körper- und Ideenträger, denn ihr ernährungsphysiologischer Wert ist erheblich. Sie enthält hochwertiges Eiweiß, Stärke, die Vitamine C, B1, B2 sowie Mineralstoffe, insbesondere Kalium. ” (“The potato is particularly suitable as a body and idea carrier, because its nutritional value is considerable. It contains high-quality protein, starch, vitamins C, B1, B2, and minerals, especially potassium.”). In particular, there is a political dimension to the work in the sense of an allusion to power relations (Berger 2019, p. 4; Lange-Berndt 2015, p. 15). As a source of energy and as a staple food of the broad population in Latin America and beyond, the use of the potato by Grippo, both in a single object and in a series, alludes to the power of the people who come together and, thanks

to the energy they generate together, to the possibility of a transformational process of a social and political nature.

Materiality and meaning can hardly be separated when interpreting *Energía de una papa* and art in general. In its consideration of material properties and art history semantics, our reading faces a challenge that has been summed up by the art historian Horst Bredekamp and the historian of science and media Wolfgang Schäffner as representing a “Fusion des Symbolischen und Materialen” (“fusion of the symbolic and the material”), and as “Prozesse, in denen symbolische und materiale Operationen zusammenfallen” (“processes in which symbolic and material operations come together”, (Bredekamp and Schäffner 2020, pp. 306–7). Grippo’s work thus reflects the commonality of neo-materialist approaches that take into account “[...] das komplexe und dynamische Zusammenspiel sinnhaft-symbolischer Prozesse und materieller Ordnungen” (“The complex, dynamic interplay of sensory/symbolic processes and material order”; Hoppe and Lemke 2021, p. 10).

This close reading of Victor Grippo’s *Energía de una papa* with regard to the topic of the materiality of conceptual art, interweaving it with neo-materialistic aspects of Barad’s agential realism, can thus encourage us to consider materiality in a comprehensive manner. It is not just the potato as food-as-art-material or the voltameter as a ready-made that should be our main focus, but all the organic, non-tangible (electrical energy) and non-human materials involved in the artistic work, as well as the role of the human being in setting its processes in motion.

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Notes

- ¹ For a material history of art in modern art cf. in addition to the cited Wagner also (de Mèredieu 2008; Pugliese 2006).
- ² For a comprehensive discussion of Victor Grippo’s life and work in the context of Latin American art and politics, see the articles, appendices in form of the artist’s writings, and a detailed curriculum vitae in (Battiti 2004).
- ³ For a critical discussion of the category of authenticity or of different levels of authenticity as authenticities with a focus on material, concept, and context from the perspective of restoration science and curatorial practice, see the contributions in (Hermens and Friske 2009), on installation in particular: (Jadzinska 2009) and (Pugliese and Ferriani 2009).
- ⁴ The galvanic cell can be traced back to experiments by the Italian physician and natural scientist Luigi Galvani. Around 1780, he discovered that when frogs’ legs were touched with two interconnected wires made of different metals, the animals’ muscles twitched.
- ⁵ Affordance means the inherent potential of things to act (as a kind of agency), which is given due to their material nature; the affordance theory goes back to the psychologist James Gibson, see for example: Gibson, James Jerome. 1977. *The Theory of Affordances*. In *Perceiving, Acting, and Knowing. Toward an Ecological Psychology*. Edited by Shaw, Robert and John Bransford. Hillsdale NJ: Lawrence Erlbaum, pp. 67–82 and Gibson. 1979. *The Ecological Approach to Visual Perception*. Boston/New York/Atlanta/Geneva/III./Dallas/Palo Alto: Houghton Mifflin Company.
- ⁶ Wooden stand, battery-powered motor, elastic V-belt, wire, and two (interchangeable) potatoes, 790 × 395 × 410 mm, 1969/70. Various versions, among others in the Tate London and the Kunstmuseum Bern, cf. (Beil 2002, p. 226).

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